

IN THE CLAIMS

1. (original) An equalizer for processing blocks of data comprising:

a finite filter having an output, wherein the finite filter is arranged to substantially eliminate a ghost from a received signal in order to provide a substantially ghost free signal at the output; and,

a post-processor arranged to apply a window function to the output of the finite filter, wherein the window function has a duration substantially equal to a duration of a block of data.

2. (original) The equalizer of claim 1 wherein the finite filter is a time domain finite filter.

3. (original) The equalizer of claim 2 wherein the time domain finite filter comprises an FIR filter.

4. (original) The equalizer of claim 1 wherein the finite filter is a frequency domain finite filter.

5. (original) The equalizer of claim 4 wherein the frequency domain finite filter comprises a Fast Fourier Transform arranged to transform the received signal to the frequency domain, a multiplier arranged to multiply the received signal by coefficients to substantially eliminate the ghost from the received signal, and an inverse Fast Fourier Transform arranged to transform the substantially ghost free signal back to the time domain.

6. (original) The equalizer of claim 1 further comprising a pre-processor, wherein the pre-processor applies coefficients b to the received signal, wherein pre-processor is arranged to provide a pre-processed output to the finite filter, and wherein the post-processor applies coefficients c.

7-8 (cancelled)

9. (original) The equalizer of claim 6 wherein the coefficients b comprise steps of different magnitudes, and wherein the coefficients c comprise steps of different magnitudes.

10-13 (cancelled)

14. (original) The equalizer of claim 1 wherein the window function extends between t_0 and t_c , wherein the duration $t_c - t_0$ substantially matches a block of data, wherein the window function is substantially zero for $t < t_0$ and for $t > t_c$, and wherein the window function is non-zero where $t_0 < t < t_c$.

15. (original) The equalizer of claim 1 wherein the finite filter applies coefficients a to a main signal of the received signal and to the ghost.

16. (original) The equalizer of claim 15 wherein the coefficients a are complex.

17-44 (cancelled)

45. (original) A method of substantially eliminating a ghost of a received main signal containing data blocks comprising the following steps:

a) applying coefficients a to the received main signal and the ghost in order to substantially eliminate the ghost, thereby producing a substantially ghost-free

signal, wherein the coefficients a have a duration longer than a duration of a data block; and,

b) applying coefficients c to the substantially ghost-free signal, wherein the coefficients c form a window function having a duration substantially equal to the duration of a data block.

46. (original) The method of claim 45 further comprising the step of applying, prior to step a), coefficients b to the received main signal and the ghost in order to modulate the received main signal and the ghost so that the received main signal and the ghost are unequal.

47. (original) The method of claim 46 wherein step b comprises the step of applying the coefficients c so as to remove the modulation imposed on the received main signal by the coefficients b.

48. (original) The method of claim 46 wherein the coefficients b and c comprise steps of different magnitudes, wherein each of the steps has a length in time substantially equal to a temporal separation between the received main signal and the ghost, and wherein a

ratio of the magnitude of one of the steps to the magnitude of an adjacent step is unequal to one.

49. (original) The method of claim 46 wherein the coefficients b and c comprise corresponding exponential curves.

50. (original) The method of claim 46 wherein the coefficients b comprise steps of different magnitudes, wherein each of the steps has a length in time substantially equal to a temporal separation between the received main signal and the ghost, and wherein a ratio of the magnitude of one of the steps to the magnitude of an adjacent step is unequal to one.

51. (original) The method of claim 46 wherein the coefficients b comprise an exponential curve.

52. (new) The method of claim 45 wherein the applying of coefficients a to the received main signal and the ghost comprises applying frequency domain coefficients to the received main signal and the ghost.

53. (new) The method of claim 52 wherein the applying of coefficients a to the received main signal and the ghost comprises transforming the received signal to the frequency domain, multiplying the received signal by the frequency domain coefficients to substantially eliminate the ghost from the received signal, and inverse transforming the substantially ghost free signal back to the time domain.

54. (new) The method of claim 53 wherein the applying of coefficients c to the substantially ghost-free signal comprises applying a window function to the substantially ghost-free signal, wherein the window function extends between t_0 and t_c , wherein the duration $t_c - t_0$ substantially matches a block of data, wherein the window function is substantially zero for $t < t_0$ and for $t > t_c$, and wherein the window function is a substantially constant non-zero value where $t_0 < t < t_c$.

55. (new) The method of claim 52 wherein the applying of coefficients c to the substantially ghost-free signal comprises applying a window function to the substantially ghost-free signal, wherein the window function extends between t_0 and t_c , wherein the duration

$t_c - t_0$ substantially matches a block of data, wherein the window function is substantially zero for $t < t_0$ and for $t > t_c$, and wherein the window function is a substantially constant non-zero value where $t_0 < t < t_c$.

56. (new) The equalizer of claim 5 wherein the window function extends between t_0 and t_c , wherein the duration $t_c - t_0$ substantially matches a block of data, wherein the window function is substantially zero for $t < t_0$ and for $t > t_c$, and wherein the window function is a substantially constant non-zero value where $t_0 < t < t_c$.

57. (new) The equalizer of claim 4 wherein the window function extends between t_0 and t_c , wherein the duration $t_c - t_0$ substantially matches a block of data, wherein the window function is substantially zero for $t < t_0$ and for $t > t_c$, and wherein the window function is a substantially constant non-zero value where $t_0 < t < t_c$.